

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph at page 1, line 21, with the following rewritten paragraph:

Referring to FIG. 1 ~~6-8~~, a description will be provided hereinafter of the structure of the typical surface discharge AC type plasma display panel. FIG. 6 is a perspective view of the surface discharge AC type plasma display panel. FIG. 7 is a sectional view taken along line A-A of FIG. 6, and FIG. 8 is a sectional view taken along line B-B of FIG. 1 ~~6~~. Transparent surface substrate 1 such as a glass substrate is formed with a plurality of strip-shaped display electrodes 4 each formed of a pair of scan electrode 2 and sustain electrode 3, and light-shielding layer 5 is formed between adjacent display electrodes 4 on surface substrate 1. Scan electrode 2 and sustain electrode 3 are formed of respective transparent electrodes 2a, 3a and respective buses 2b, 3b, made of silver or the like, and which are electrically connected to respective transparent electrodes 2a, 3a. Dielectric layer 6 is formed above surface substrate 1 to cover display electrodes 4 and is covered with MgO film 7 functioning as a protective film as well as a secondary-electron-emitting film. Front panel 20 is thus formed of these elements.

Please replace the paragraph at page 11, line 16, with the following rewritten paragraph:

FIG. 4 shows sectional views of a back panel, illustrating the phosphor layers having respective colors and different surface areas in accordance with a second exemplary embodiment. FIG. 4(a) illustrates a state subsequent to stage S2 of a firing step illustrated by FIG. 3 ~~2~~, and FIG. 4(b) illustrates a state obtained upon termination of the firing step. In the present embodiment, the numbers of gelled substances 53a, 53b, 53c at respective surfaces of red, blue and green phosphor layers 12a, 12b, 12c are controlled individually as shown in FIG. 4(a). In other words, an adjustment is made to an organic binder so that gelled substances 53b of blue phosphor layer 12b increase in number compared with gelled substances 53a of red phosphor layer 12a and gelled substances 53c of green phosphor layer 12c. As a result of the firing step, the surface area of blue phosphor layer 12b can be increased compared with those of red and green phosphor layers 12a, 12c, as shown in FIG. 4(b). This not only allows barrier ribs to be formed at equal intervals, thereby improving a

manufacturing yield of back panel 30 but also realizes a plasma display panel that provides extremely high visibility and has high luminance. It goes without saying that the surface area of each of the phosphor layers having respective colors can be controlled by changing the size of the gelled substance for each color instead of changing the number of gelled substances.

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A plasma display panel comprising, above one of a pair of substrates facing each other across a discharge space;

an electrode;

a dielectric layer covering the electrode;

a barrier rib provided on the dielectric layer, the barrier rib being parallel to the electrode; and

a phosphor layer provided to cover a side of the barrier rib and the dielectric layer between the barrier ribs, the phosphor layer including, at least at a surface thereof exposed to the discharge space, a recessed and projected part having one of width and depth that is more than a maximum particle diameter of a phosphor forming the phosphor layer.

2. (Original) The plasma display panel of claim 1, wherein the recessed and projected part has one of the width and depth that ranges from 5 μm to 10 μm .

3. (Original) The plasma display panel of claim 1, wherein the phosphor layer includes red, blue and green phosphor layers, and the recessed and projected parts of the phosphor layers have respective shapes varying from color to color.

4. (Original) A method of manufacturing a plasma display panel including, above a substrate, an electrode, a dielectric layer covering the electrode and a barrier rib provided parallel to the electrode on the dielectric layer, the method comprising the steps of:

making an organic binder by dissolving, through heating, an organic solvent and a plurality of resins having different solubilities with respect to the organic solvent;

making phosphor paste by mixing the organic binder with a phosphor particle;

forming a phosphor film by applying the phosphor paste between the adjacent barrier ribs;

drying the phosphor film between the barrier ribs; and

firing the phosphor film for burning out the organic binder.

5. (Original) The manufacturing method of claim 4, wherein the organic solvent is a solvent mixture of α -terpineol (α -TPO) and butyl carbitol (BCA), and the resins of different solubilities are ethyl celluloses of different ethoxyl contents.

6. (Original) The manufacturing method of claim 5, wherein the resins include ethyl cellulose having an ethoxyl content of 48 to 49.5% and ethyl cellulose having an ethoxyl content of 45.0 to 47.0%.

7. (Original) A method of manufacturing a plasma display panel including, above a substrate, an electrode, a dielectric layer covering the electrode and a barrier rib provided parallel to the electrode on the dielectric layer, the method comprising the steps of:

making a first organic binder by dissolving ethyl cellulose having an ethoxyl content of 48 to 49.5% and an organic solvent through heating;

making a first phosphor paste by mixing the first organic binder with a phosphor particle;

forming a first phosphor film by applying the first phosphor paste between the adjacent barrier ribs;

making a second organic binder by dissolving ethyl cellulose having an ethoxyl content of 45.0 to 47.0% and an organic solvent through heating;

making a second phosphor paste by mixing the second organic binder with a phosphor particle;

forming a second phosphor film by applying the second phosphor paste to the first phosphor film;

drying the first and second phosphor films between the barrier ribs; and

firing the phosphor films for burning out the organic binders.

8. (Original) The manufacturing method of claim 7, wherein the organic solvent is a solvent mixture of α -terpineol (α -TPO) and butyl carbitol (BCA).

9. (Currently Amended) The manufacturing method of claim 4 ~~or 7~~, wherein the firing step includes a plurality of temperature maintaining ranges for burning out the organic binder including the resins of different ethoxyl contents.

10. (New) The manufacturing method of claim 7, wherein the firing step includes a plurality of temperature maintaining ranges for burning out the organic binder including the resins of different ethoxyl contents.

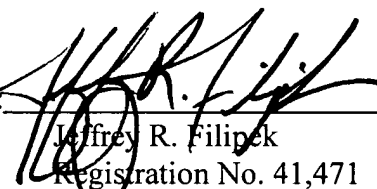
REMARKS

The present Preliminary Amendment is submitted to amend claim 1, add new claim 10, and delete the multiple dependency of claim 9, thereby placing such claims in condition for examination and reducing the required PTO filing fee.

Also, by this Preliminary Amendment, various editorial amendments have been made to the specification. No new matter has been added.

Respectfully submitted,

Haruhiro YUKI et al.

By: 
Jeffrey R. Filipek
Registration No. 41,471
Attorney for Applicants

JRF/fs
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
October 7, 2003